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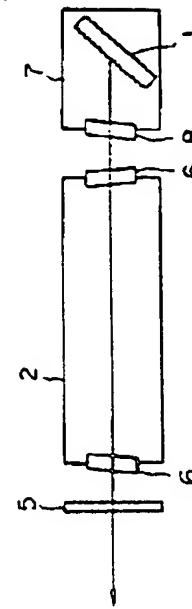
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APPLICANT : KOMATSU LTD;

INVENTOR : KOBAYASHI YUKIO;

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TITLE : NARROW-BAND OSCILLATION LASER
DEVICE



ABSTRACT : PURPOSE: To prevent the beam profile of a laser from being fluctuated and to enhance the stability of a pulse by a method wherein a grating is installed inside an airtight chamber.

CONSTITUTION: The refractive index of a gas can be adjusted by changing the pressure of the gas or the composition of the gas inside an airtight chamber 7. Consequently, when the wavelength of a laser beam is fixed to a wavelength corresponding to the blaze angle of a grating 1, the grating 1 can be used at maximum efficiency and a narrow band can be achieved efficiently. As the grating 1, an echelle grating is optimum. At the grating, the vertical angle of grooves is nearly vertical and the grating having a large blaze angle can be manufactured. Its efficiency and its resolving power are high. Since a free spectral range is small, it is possible to easily adjust the laser wavelength inside the airtight chamber to a wavelength corresponding to the blaze angle.

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